Ms. Diane Green
Sellersburg Stone Company, Inc.
P.O. Box D
Sellersburg, Indiana 47172

Re: 019-11077
First Significant Revision to
FESOP 019-5424-03109

Dear Ms. Green:

Sellersburg Stone Company, Inc., was issued a permit on December 9, 1996, for a stationary drum mix asphalt plant with a current capacity of 600 tons per hour. A letter requesting the addition of a new 300 tons per hour drum mix asphalt plant to this permit was received on June 17, 1999. Pursuant to the provisions of 326 IAC 2-8-11.1 a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document. The following changes shall be made to the emission unit descriptions and operating conditions of the FESOP to incorporate the new emission units (bold emphasis added to new language):

1. The general source description in Section A, Item A.1, on Page 4 of the permit shall be revised as follows:

   The Permittee owns and operates ~~a~~ **two (2)** stationary hot drum-mix asphalt plant**s** ~~with a maximum capacity of 600 tons per hour~~.

2. The emission units and pollution control summary in Section A, Item A.2, on Page 4 of the permit shall be revised to include the new emission units as follows:

   The stationary source consists of the following emission units and pollution control devices:

   **Plant #1:**

   (a) One (1) 30,000 gallon liquid asphalt storage tank for asphalt cement.

   (b) One(1) 20,000 gallon liquid asphalt storage tank for asphalt cement.

   (c) One (1) hot drum mixer, identified as Unit #2, with a maximum capacity of 600 tons of asphalt per hour, equipped with one (1) drum mix dryer utilizing natural gas at a maximum rated capacity of 200 million British thermal units per hour (MMBtu/hr), using one (1) baghouse for particulate control, and exhausting to one (1) stack, S/V ID #1.

**Plant #2**

**(d) One (1) drum dryer/mixer with a maximum throughput of 300 tons per hour utilizing a dryer burner fired by natural gas with a maximum heat input capacity of 116 million British thermal units per hour (MMBtu/hr). The dryer/mixer exhausts at stack SV2-1.**

**(e) One (1) baghouse with a total filter area of 7975 $ft^2$.**

**(f) Two (2) 30,000 gallon liquid asphalt storage tanks.**

**(g) One (1) 15,000 gallon liquid asphalt storage tank.**

3. The insignificant activities described in Section A, Item A.1, on Page 4 of the permit shall be modified to include the 1.4 MMBtu/hr hot oil heater for Plant #2 as follows:

(a) One (1) hot oil heater, fired by natural gas and rated at 5 million British thermal units. The heater exhausts at stack SV2.

(b) One (1) hot oil heater, fired by natural gas and rated at 1.5 million British thermal units.

(c) Replacement or repair of electrostatic precipitators, bags in baghouses, and filters in other air filtration equipment.

(d) A laboratory as defined in 326 IAC 2-7-1(20)(C).

(e) One (1) material storage and handling process, with a maximum storage capacity of 15,000 tons for limestone, 10,000 tons for sand, and 2,000 tons for reclaimed asphalt pavement (RAP), utilizing a wetting system for particulate control.

**(f) One (1) hot oil heater, fired by natural gas with a maximum heat input capacity of 1.4 million British thermal units per hour. The heater exhausts at stack SV2-2.**

Note: The above list of insignificant activities includes a 1.5 MMBtu/hr hot oil heater that was mistakenly not included in SMF-019-9885. Also, Page 4a has been created to make room for the changes to Section A.

4. The facilities description at the top of Section D.1 on Page 21 of the permit shall be revised as follows to include the appropriate emission units from the new asphalt plant:

**Plant #1**
One (1) hot drum mixer, identified as Unit #2, with a maximum capacity of 600 tons of asphalt per hour, equipped with one (1) drum mix dryer utilizing natural gas at a maximum rated capacity of 200 million British thermal units per hour (MMBtu/hr), using one (1) baghouse for particulate control, and exhausting to one (1) stack, S/V ID #1.

**Plant #2**
**One (1) drum dryer/mixer with a maximum throughput of 300 tons per hour utilizing a dryer burner fired by natural gas with a maximum heat input capacity of 116 million British thermal units per hour (MMBtu/hr), using one (1) baghouse for particulate control, and exhausting to stack SV2-1.**

5. The fuel usage limitation in Condition D.1.1 (Nitrogen Oxides) on Page 21 of the permit shall be revised to limit the combined usage of natural gas in the asphalt plant dryer burners. The new limited usage is based on emission factors from the most recent supplement to the Fifth Edition of AP-42 Section 1.4 dated March, 1998, and correct a mistake made in calculating the fuel limitation under Significant Modification No. 019-9885. The changes to the condition are as follows:

D.1.1 Nitrogen Oxides ($NO_x$)
The **combined** total usage of natural gas **in the Plant #1 and Plant #2 dryer burners** shall be limited to ~~1386~~ **682.15** million cubic feet per **twelve (12) consecutive month period** ~~year (MMcf/yr) based on a rolling monthly limit~~. This is equivalent to $NO_x$ emissions of ~~99~~ **95.5** tons per **twelve (12) consecutive months** ~~year~~. Due to this limit, the Emission Offset (326 IAC 2-3) and the Prevention of Significant Deterioration (326 IAC 2-2 and 40 CFR 52.21) rules do not apply.

6. Condition D.1.2 (Particulate Matter) on Page 21 of the permit shall be revised to include the new asphalt plant as follows:

D.1.2 Particulate Matter (PM)

Federal: Pursuant to the New Source Performance Standards, 326 IAC 12 (40 CFR 60.90 - 60.93, Subpart I), particulate matter emission from the asphalt plant**s** shall not exceed 0.04 grains per dry standard cubic foot (gr per dscf). This is equivalent to ~~a~~ particulate matter emission rate**s** of 21.44 pounds per hour **and 13.96 pounds per hour from Plants #1 and #2, respectively**. ~~Compliance with these limits will satisfy 326 IAC 5-1 and 326 IAC 6-3-2.~~

State: Pursuant to 326 IAC 6-1-2 (Particulate Emissions Limitations), the particulate matter emission from the asphalt plant**s** shall not exceed 0.03 grains per dry standard cubic foot (gr per dscf). This is equivalent to ~~a~~ particulate matter emission rate**s** of 16.08 pounds per hour **and 10.47 pounds per hour from Plants #1 and #2, respectively**.

7. An asphalt production limit shall be added to Page 21 as Condition D.1.2a (Particulate Matter). This limitation will reduce particulate matter emission potentials from conveying, handling, truck traffic, and the drying/mixing operations such that Prevention of Significant Deterioration requirements, 326 IAC 2-2 and 40 CFR 52.21, do not apply. The new condition shall be as follows:

**D.1.2a Particulate Matter (PM)**

**The combined total production of asphalt mix in Plant #1 and Plant #2 shall be limited to 4,000,000 tons per twelve (12) consecutive month period. During the first twelve (12) months of operation, the production of asphalt mix shall be limited such that the total production divided by the accumulated months of operation shall not exceed 333,333 tons per month. This production limit is equivalent to PM emissions of 162.7 tons per twelve (12) consecutive months from the asphalt plant dryers/mixers, conveying and handling, and unpaved road traffic. Due to this limit, the Prevention of Significant Deterioration (326 IAC 2-2 and 40 CFR 52.21) rules do not apply.**

8. The particulate matter 10 microns or less in diameter (PM-10) limiting condition, D.1.3, on Page 21 of the permit shall be modified to include the new asphalt plant. The revised PM-10 limits are based on the asphalt production limit added as Condition D.1.2a, above. Condition D.1.3 shall be modified as follows:

D.1.3 Particulate Matter 10 Microns (PM-10)

Pursuant to 326 IAC 2-8-4, particulate matter 10 microns emissions from the **Plant #1 and Plant #2** aggregate dryer/mixer**s** shall not exceed ~~19.55~~ **0.0325** pounds per ~~hour~~ **ton of asphalt mix produced, each**, including both filterable and condensible fractions. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

9. A new condition, D.1.5a (Volatile Organic Compounds), shall be added to Page 22 of the permit so that Sellersburg Stone Company , Inc., has the flexibility to produce coldmix asphalt. The new condition shall be as follows:

**D.1.5a Volatile Organic Compounds (VOC)**

**The input VOC usage in the production of cold mix cutback asphalt shall be limited to 78.6 tons per twelve (12) consecutive month period. During the first twelve (12) months of operation, the input VOC usage shall be limited such that the total usage divided by the accumulated months of operation shall not exceed 6.55 tons per month. This is equivalent to VOC emissions of 75.5 tons per twelve (12) consecutive month period based on 95% volatilization. Therefore, the Emission Offset (326 IAC 2-3) and Part 70 rules (326 IAC 2-7) do not apply.**

10. Condition D.1.6 (Preventive Maintenance Plan) on Page 22 of the permit shall be revised to apply to the new asphalt plant as follows:

D.1.6 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for ~~this facility~~ **these facilities** and ~~its~~ **their respective** control device**s**.

11. The performance stack testing requirements in Condition D.1.7 on Page 22 of the permit shall be revised to clarify the time frame for the existing Plant #1 and to add provisions for testing the new Plant #2. The modified condition shall be as follows:

D.1.7 Testing Requirements [326 IAC 2-8-5(a)(1), (4)]
Within 180 days after issuance of ~~this permit~~ **Significant Modification No. 019-9885**, the Permittee shall perform PM and PM-10 testing **on the Plant #1 dryer/mixer exhaust, and within 60 days of reaching maximum capacity, but no longer than 180 days after startup, the Permittee shall perform PM and PM-10 testing on the Plant #2 dryer/mixer exhaust. These tests shall utilize** ~~utilizing~~ Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other methods as approved by the Commissioner. ~~This~~ **These** test**s** shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensible PM-10. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

12. Condition D.1.8 (Particulate Matter) on Page 22 of the permit (Page 23 of the revised pages) shall be modified to include the new asphalt plant as follows:

D.1.8 Particulate Matter (PM)
The baghouse for PM control **on each dryer/mixer** shall be in operation at all times when the **associated** asphalt plant is in operation and exhausting to the outside atmosphere.

13. Item (a) of Condition D.1.9 (Visible Emission Notations) on Page 22 of the permit (Page 23 of the revised pages) shall be changed as follows to account for the new asphalt plant:

D.1.9(a) Daily visible emission notations of ~~the~~ **each** asphalt plant stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

14. The language of Condition D.1.10 (Parametric Monitoring) on Page 23 of the permit shall be revised to include the new asphalt plant baghouse pressure drop range. An inlet temperature range for both baghouses has also been added which was included in Condition D.1.5 of the Second Minor Modification of the FESOP (019-9685) but inadvertantly left out of the subsequent Condition D.1.10 of the First Significant Modifiation (019-9885). The revised condition shall be as follows:

D.1.10 Parametric Monitoring
**(a)** The Permittee shall record the total static pressure drop across the baghouse**s** used in conjunction with the asphalt plant**s**, at least once weekly when ~~the~~ **each** asphalt plant is in operation ~~when~~ **and** venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse**s** shall be maintained within the range of 3.0 and 5.0 inches of water **for**

**the Plant #1 baghouse and 3.0 and 6.0 inches of water for the Plant #2 baghouse** or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

**(b) The inlet temperature to each baghouse shall be maintained within a range of 250-320 degrees Fahrenheit ($^{o}$F) to prevent overheating of the bags and to prevent low temperatures from mudding up the bags.**

15. Condition D.1.11 (Baghouse Inspections) on Page 23 of the permit shall be modified to include both baghouses and clarify that the baghouse does not have to be in operation while the bags are being inspected. The revised condition shall be as follows:

D.1.11 Baghouse Inspections
An inspection **of all bags** shall be performed **for** each **baghouse every** calender quarter ~~of all bags controlling the asphalt plant when venting to the atmosphere~~. All defective bags shall be replaced.

16. Item (a) of Condition D.1.13 (Recordkeeping Requirements) on Page 23 of the permit (Page 23a of the revised pages) shall be revised to clarify records of natural gas usage should be kept and require records of asphalt mix production and volatile organic compound (VOC) usage in cold mix production be kept to document compliance with Conditions D.1.2a and D.1.5a as follows:

D.1.13(a) To document compliance with Condition D.1.1, **D.1.2a and D.1.5a,** the Permittee shall maintain records in accordance **with the items** below.

(1) ~~The consumption of natural gas for the entire source must be limited to 1386 million cubic feet (MMcf) per year.~~ **Monthly records of the natural gas used in each asphalt plant dryer burner.**

**(2) Monthly records of the amount of asphalt mix produced at each asphalt plant.**

**(3) The amount and VOC contents of each diluent used in the production of cold mix cutback asphalt at each plant. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.**

17. The reporting requirements in Condition D.1.14 on Page 23a of the permit (Page 23b of the revisions) shall be modified to require quarterly reporting for the asphalt mix production and coldmix VOC usage limits added as Conditions D.1.2a and D.1.5a, respectively, as follows:

D.1.14 Reporting Requirements

**(a)** A quarterly summary of the information to document compliance with Condition D.1.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

**(b) A quarterly summary of the information to document compliance with Condition D.1.2a shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.**

**(c) A quarterly summary of the information to document compliance with Condition D.1.5a shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.**

18. The facilities description at the top of Section D.2 on Page 24 of the permit shall be revised as follows to include the liquid asphalt storage tanks associated with the new asphalt plant:

**Plant #1**
~~(a)~~ One (1) 30,000 gallon liquid asphalt storage tank for asphalt cement.
~~(b)~~ One (1) 20,000 gallon liquid asphalt storage tank for asphalt cement.

**Plant #2**
**Two (2) 30,000 gallon liquid asphalt storage tanks.**
**One (1) 15,000 gallon liquid asphalt storage tank.**

19. Condition D.2.1 on Page 24 of the permit shall be revised to include the new storage tanks under the NSPS Subpart Kb applicable requirements as follows:

D.2.1 **Volatile Liquid Storage Tanks [326 IAC 12]**
~~That~~ **The Plant #1 and Plant #2** storage tanks ~~(#15 & #16)~~ shall comply with the New Source Performance Standards (NSPS), 326 IAC 12 (40 CFR Part 60.116b only, Subpart Kb). 40 CFR Part 60.116b requires the permittee to maintain accessible records showing the dimension of each storage vessel and an analysis showing the capacity of the storage vessel. Records shall be kept for the life of the storage tanks.

20. The source information on the FESOP Quarterly Report form on Page 28 of the permit has been revised as follows to be consistent with the changes to Condition D.1.1 of the permit in Item 5, above:

| | |
|---|---|
| Source Name: | Sellersburg Stone Company |
| Source Address: | 1019 East Utica Street, Sellersburg, IN 47172 |
| FESOP No.: | F019-5424-03109 |
| ~~First Significant Modification:~~ | ~~SMF019-9885~~ |
| Facility: | **Plants #1 and #2** Aggregate Dryer **Burners** |
| Parameter: | ~~Natural gas usage~~ **Nitrogen Oxides** |
| Limit: | ~~Nitrogen oxide emissions must not to exceed 99 tons per year;~~ the **combined** ~~input of~~ natural gas usage from Plants #1 and #2 shall be limited~~,~~ to~~1386~~ **682.15** million cubic feet (MMcf) per twelve (12) consecutive month~~s~~ **period**~~,~~ ~~rolled on a monthly basis. During the first twelve (12) months of operation under this permit, the input of natural gas shall be limited such that the total million cubic feet divided by the accumulated months of operation shall not exceed 116 million cubic feet (MMcf) per month.~~ |

21. Two new FESOP Quarterly Report forms have been added as Pages 28a and 28b of the permit for the purpose of reporting asphalt mix produced and volatile organic compound (VOC) usage as required by the revisions to Condition D.1.14 in Item 17, above.

The following additional conditions are applicable to the construction of new emission units for the proposed project:

1. General Construction Conditions
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Management (OAM).

2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Janusz Johnson, OAM, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call at (800) 451-6027, press 0 and ask for extension (2-8325), or dial (317) 232-8325.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments
JKJ
cc: File - Clark County
U.S. EPA, Region V
Clark County Health Department
Air Compliance Section Inspector - Joe Foyst
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

# FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) OFFICE OF AIR MANAGEMENT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
Phone: 1-800-451-6027

## Sellersburg Stone Company Inc.
## 1019 East Utica Street
## Sellersburg, Indiana 47172

(Herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the facilities listed in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 and contains the conditions and provisions specified in 326 IAC 2-8 and 40 CFR Part 70.6 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments) and IC 13-15 and IC 13-17 (prior to July 1, 1996, IC 13-1-1-4 and IC 13-7-10).

| | |
|---|---|
| Operation Permit No.: F019-5424-03109 | |
| Issued by:<br>Paul Dubenetzky, Branch Chief<br>Office of Air Management | Issuance Date: December 9, 1996 |

First Minor Modification 019-8782, issued on October 14, 1997
Second Minor Modification 019-9865, issued on September 14, 1998
First Significant Modification 019-9885, issued on October 28, 1998

| | |
|---|---|
| First Significant Permit Revision: 019-11077 | Pages Affected: 4, 4a, 21, 22, 23, 23a, 23b, 24, 28, 28a and 28b. |
| Issued by:<br>Paul Dubenetzky, Branch Chief<br>Office of Air Management | Issuance Date: |

## SECTION A SOURCE SUMMARY

A.1 General Information

The Permittee owns and operates two (2) stationary hot drum-mix asphalt plants.

| | |
|---|---|
| Responsible Official: | Diane M. Green |
| Source Address: | 1019 East Utica Street, Sellersburg, IN 47172 |
| Mailing Address: | P.O. Box D, Sellersburg, IN 47172 |
| SIC Code: | 2951 |
| County Location: | Clark |
| County Status: | Nonattainment for ozone<br>Attainment for all other criteria pollutants |
| Source Status: | Synthetic Minor Source, FESOP Program |

A.2 Emission Units and Pollution Control Summary

The stationary source consists of the following emission units and pollution control devices:

Plant #1:

(a) One (1) 30,000 gallon liquid asphalt storage tank for asphalt cement.

(b) One(1) 20,000 gallon liquid asphalt storage tank for asphalt cement.

(c) One (1) hot drum mixer, identified as Unit #2, with a maximum capacity of 600 tons of asphalt per hour, equipped with one (1) drum mix dryer utilizing natural gas at a maximum rated capacity of 200 million British thermal units per hour (MMBtu/hr), using one (1) baghouse for particulate control, and exhausting to one (1) stack, S/V ID #1.

Plant #2

(d) One (1) drum dryer/mixer with a maximum throughput of 300 tons per hour utilizing a dryer burner fired by natural gas with a maximum heat input capacity of 116 million British thermal units per hour (MMBtu/hr). The dryer/mixer exhausts at stack SV2-1.

(e) One (1) baghouse with a total filter area of 7975 $ft^2$.

(f) Two (2) 30,000 gallon liquid asphalt storage tanks.

(g) One (1) 15,000 gallon liquid asphalt storage tank.

A.3 Insignificant Activities

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(20):

(a) One (1) hot oil heater, fired by natural gas and rated at 5 million British thermal units. The heater exhausts at stack SV2.

(b) One (1) hot oil heater, fired by natural gas and rated at 1.5 million British thermal units.

(c) Replacement or repair of electrostatic precipitators, bags in baghouses, and filters in other air filtration equipment.

(d) A laboratory as defined in 326 IAC 2-7-1(20)(C).

(e) One (1) material storage and handling process, with a maximum storage capacity of 15,000 tons for limestone, 10,000 tons for sand, and 2,000 tons for reclaimed asphalt pavement (RAP), utilizing a wetting system for particulate control.

(f) One (1) hot oil heater, fired by natural gas with a maximum heat input capacity of 1.4 million British thermal units per hour. The heater exhausts at stack SV2-2.

A.4 FESOP Applicability [326 IAC 2-8-2]
This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) for a Federally Enforceable State Operating Permit (FESOP).

**SECTION D.1 FACILITY OPERATION CONDITIONS**

Plant #1
One (1) hot drum mixer, identified as Unit #2, with a maximum capacity of 600 tons of asphalt per hour, equipped with one (1) drum mix dryer utilizing natural gas at a maximum rated capacity of 200 million British thermal units per hour (MMBtu/hr), using one (1) baghouse for particulate control, and exhausting to one (1) stack, S/V ID #1.

Plant #2
One (1) drum dryer/mixer with a maximum throughput of 300 tons per hour utilizing a dryer burner fired by natural gas with a maximum heat input capacity of 116 million British thermal units per hour (MMBtu/hr), using one (1) baghouse for particulate control, and exhausting to stack SV2-1.

**Emissions Limitations [326 IAC 2-8-4(1)]**

D.1.1 Nitrogen Oxides ($NO_x$)

The combined total usage of natural gas in the Plant #1 and Plant #2 dryer burners shall be limited to 682.15 million cubic feet per twelve (12) consecutive month period. This is equivalent to $NO_x$ emissions of 95.5 tons per twelve (12) consecutive months. Due to this limit, the Emission Offset (326 IAC 2-3) and the Prevention of Significant Deterioration (326 IAC 2-2 and 40 CFR 52.21) rules do not apply.

D.1.2 Particulate Matter (PM)

Federal: Pursuant to the New Source Performance Standards, 326 IAC 12 (40 CFR 60.90 - 60.93, Subpart I), particulate matter emission from the asphalt plants shall not exceed 0.04 grains per dry standard cubic foot (gr per dscf). This is equivalent to particulate matter emission rates of 21.44 pounds per hour and 13.96 pounds per hour from Plants #1 and #2, respectively.

State: Pursuant to 326 IAC 6-1-2 (Particulate Emissions Limitations), the particulate matter emission from the asphalt plants shall not exceed 0.03 grains per dry standard cubic foot (gr per dscf). This is equivalent to particulate matter emission rates of 16.08 pounds per hour and 10.47 pounds per hour from Plants #1 and #2, respectively.

D.1.2a Particulate Matter (PM)

The combined total production of asphalt mix in Plant #1 and Plant #2 shall be limited to 4,000,000 tons per twelve (12) consecutive month period. During the first twelve (12) months of operation, the production of asphalt mix shall be limited such that the total production divided by the accumulated months of operation shall not exceed 333,333 tons per month. This production limit is equivalent to PM emissions of 162.7 tons per twelve (12) consecutive months from the asphalt plant dryers/mixers, conveying and handling, and unpaved road traffic. Due to this limit, the Prevention of Significant Deterioration (326 IAC 2-2 and 40 CFR 52.21) rules do not apply.

D.1.3 Particulate Matter 10 Microns (PM-10)

Pursuant to 326 IAC 2-8-4, particulate matter 10 microns emissions from the Plant #1 and Plant #2 aggregate dryer/mixers shall not exceed 0.0325 pounds per ton of asphalt mix produced, each, including both filterable and condensible fractions. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

D.1.4 Opacity [326 IAC 12] [40 CFR 60.90, Subpart I]

Pursuant to 326 IAC 12, (40 CFR Part 60.92, Subpart I) "Standards of Performance for Hot Mix Asphalt Facilities", the mixing and drying operations shall not discharge or cause the discharge into the atmosphere any gases which exhibit 20% opacity or greater.

D.1.5 Volatile Organic Compounds (VOC) [326 IAC 8-5-2]

(a) Pursuant to 326 IAC 8-5-2 (Miscellaneous Operations: Asphalt Paving), no person shall cause or allow the use of cutback asphalt or asphalt emulsion containing more than seven percent (7%) of distillate by volume of emulsion for any paving application except:

(1) penetrating prime coating;
(2) stockpile storage;
(3) application during the months of November, December, January, February, and March.

(b) Cutback asphalt or asphalt emulsion containing oil distillate or other volatile organic compounds (VOC) other than liquid asphalt shall not be produced at this source without prior review and approval by OAM. Compliance with this part of this condition satisfies part (a) of this condition, but does not preclude the use of water based emulsifying agents in the production of cold mix asphalt.

D.1.5a Volatile Organic Compounds (VOC)

The input VOC usage in the production of cold mix cutback asphalt shall be limited to 78.6 tons per twelve (12) consecutive month period. During the first twelve (12) months of operation, the input VOC usage shall be limited such that the total usage divided by the accumulated months of operation shall not exceed 6.55 tons per month. This is equivalent to VOC emissions of 75.5 tons per twelve (12) consecutive month period based on 95% volatilization. Therefore, the Emission Offset (326 IAC 2-3) and Part 70 rules (326 IAC 2-7) do not apply.

D.1.6 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their respective control devices.

**Compliance Determination Requirements**

D.1.7 Testing Requirements [326 IAC 2-8-5(a)(1), (4)]

Within 180 days after issuance of Significant Modification No. 019-9885, the Permittee shall perform PM and PM-10 testing on the Plant #1 dryer/mixer exhaust, and within 60 days of reaching maximum capacity, but no longer than 180 days after startup, the Permittee shall perform PM and PM-10 testing on the Plant #2 dryer/mixer exhaust. These tests shall utilize Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensible PM-10. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

**Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]**

D.1.8 Particulate Matter (PM)

The baghouse for PM control on each dryer/mixer shall be in operation at all times when the associated asphalt plant is in operation and exhausting to the outside atmosphere.

D.1.9 Visible Emissions Notations

(a) Daily visible emission notations of each asphalt plant stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.1.10 Parametric Monitoring

(a) The Permittee shall record the total static pressure drop across the baghouses used in conjunction with the asphalt plants, at least once weekly when each asphalt plant is in operation and venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouses shall be maintained within the range of 3.0 and 5.0 inches of water for the Plant #1 baghouse and 3.0 and 6.0 inches of water for the Plant #2 baghouse or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

(b) The inlet temperature to each baghouse shall be maintained within a range of 250-320 degrees Fahrenheit ($^{o}$F) to prevent overheating of the bags and to prevent low temperatures from mudding up the bags.

D.1.11 Baghouse Inspections

An inspection of all bags shall be performed for each baghouse every calender quarter. All defective bags shall be replaced.

D.1.12 Broken Bag or Failure Detection

In the event that bag failure has been observed:

(a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.

(b) Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated, For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion

**Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]**

D.1.13 Record Keeping Requirements

(a) To document compliance with Condition D.1.1, D.1.2a and D.1.5a, the Permittee shall maintain records in accordance with the items below.

(1) Monthly records of the natural gas used in each asphalt plant dryer burner.

(2) Monthly records of the amount of asphalt mix produced at each asphalt plant.

(3) The amount and VOC contents of each diluent used in the production of cold mix cutback asphalt at each plant. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

(b) To document compliance with Condition D.1.11, the Permittee shall maintain records of daily visible emission notations of the aggregate dryer baghouse stack exhaust.

(c) To document compliance with Condition D.1.12, the Permittee shall maintain the following:

(1) Documentation of all response steps implemented, per event .

(2) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.

(3) Quality Assurance/Quality Control (QA/QC) procedures.

(4) Operator standard operating procedures (SOP).

(5) Manufacturer's specifications or its equivalent.

(6) Equipment "troubleshooting" contingency plan.

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.14 Reporting Requirements

(a) A quarterly summary of the information to document compliance with Condition D.1.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

(b) A quarterly summary of the information to document compliance with Condition D.1.2a shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

(c) A quarterly summary of the information to document compliance with Condition D.1.5a shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

**SECTION D.2 FACILITY OPERATION CONDITIONS**

Plant #1
One (1) 30,000 gallon liquid asphalt storage tank for asphalt cement.
One (1) 20,000 gallon liquid asphalt storage tank for asphalt cement.

Plant #2
Two (2) 30,000 gallon liquid asphalt storage tanks.
One (1) 15,000 gallon liquid asphalt storage tank.

D.2.1 Volatile Liquid Storage Tanks [326 IAC 12]

The Plant #1 and Plant #2 storage tanks shall comply with the New Source Performance Standards (NSPS), 326 IAC 12 (40 CFR Part 60.116b only, Subpart Kb). 40 CFR Part 60.116b requires the permittee to maintain accessible records showing the dimension of each storage vessel and an analysis showing the capacity of the storage vessel. Records shall be kept for the life of the storage tanks.

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
# OFFICE OF AIR MANAGEMENT
# COMPLIANCE DATA SECTION

## FESOP Quarterly Report

Source Name: Sellersburg Stone Company
Source Address: 1019 East Utica Street, Sellersburg, IN 47172
FESOP No.: F019-5424-03109
Facility: Plants #1 and #2 Aggregate Dryer Burners
Parameter: Nitrogen Oxides
Limit: The combined natural gas usage from Plants #1 and #2 shall be limited to 682.15 million cubic feet (MMcf) per twelve (12) consecutive month period.

YEAR: _____

| Month | Natural Gas Usage This Month (MMcf) | Natural Gas Usage Previous 11 Months (MMcf) | 12 Month Total Natural Gas Usage (MMcf) |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

**9** No deviation occurred in this quarter.

**9** Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
# OFFICE OF AIR MANAGEMENT
# COMPLIANCE DATA SECTION

## FESOP Quarterly Report

Source Name: Sellersburg Stone Company
Source Address: 1019 East Utica Street, Sellersburg, IN 47172
FESOP No.: F019-5424-03109
Facility: Plants #1 and #2 Aggregate Dryer/Mixers
Parameter: Particulate Matter
Limit: The combined total production of asphalt mix in Plant #1 and Plant #2 shall be limited to 4,000,000 tons per twelve (12) consecutive month period. During the first twelve (12) months of operation, the production of asphalt mix shall be limited such that the total production divided by the accumulated months of operation shall not exceed 333,333 tons per month.

YEAR: _____

| Month | Asphalt Mix Produced This Month (tons) | Asphalt Mix Produced Previous 11 Months (tons) | 12 Month Total Asphalt Mix Production (tons) |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

**9** No deviation occurred in this quarter.

**9** Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
# OFFICE OF AIR MANAGEMENT
# COMPLIANCE DATA SECTION

## FESOP Quarterly Report

Source Name: Sellersburg Stone Company
Source Address: 1019 East Utica Street, Sellersburg, IN 47172
FESOP No.: F019-5424-03109
Facility: Plants #1 and #2 Aggregate Dryer/Mixers
Parameter: Volatile Organic Compounds (VOC)
Limit: The input VOC usage in the production of cold mix cutback asphalt shall be limited to 78.6 tons per twelve (12) consecutive month period based on 95% volatilization. During the first twelve (12) months of operation, the input VOC usage shall be limited such that the total usage divided by the accumulated months of operation shall not exceed 6.55 tons per month.

YEAR: _____

| Month | VOC Usage This Month (tons) | VOC Usage Previous 11 Months (tons) | 12 Month Total VOC Usage (tons) |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

**9** No deviation occurred in this quarter.

**9** Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____

# Indiana Department of Environmental Management
# Office of Air Management

## Technical Support Document (TSD) for a Significant Permit Revision to a Federally Enforceable State Operating Permit

### Source Background and Description

| | |
|---|---|
| **Source Name:** | **Sellersburg Stone Co., Inc.** |
| **Source Location:** | **1019 E. Utica Street, Sellersburg, IN 47172** |
| **County:** | **Clark** |
| **SIC Code:** | **2951** |
| **Operation Permit No.:** | **F019-5424-03109** |
| **Operation Permit Issuance Date:** | **December 9, 1996** |
| **Permit Revision No.:** | **019-11077-03109** |
| **Permit Reviewer:** | **Janusz Johnson** |

The Office of Air Management (OAM) has reviewed a revision application from Sellersburg Stone Co., Inc., relating to the construction and operation of a new 300 ton per hour asphalt plant to be added to the existing 600 tons per hour stationary asphalt plant permitted under FESOP No. 019-5424-03109. The new drum mix asphalt plant consists of the following emission units and pollution control devices:

(a) One (1) drum dryer/mixer with a maximum throughput of 300 tons per hour utilizing a dryer burner fired by natural gas with a maximum heat input capacity of 116 million British thermal units per hour (MMBtu/hr). The dryer/mixer exhausts at stack SV2-1.

(b) One (1) baghouse with a total filter area of 7975 $ft^2$.

(c) Two (2) 30,000 gallon liquid asphalt storage tanks.

(d) One (1) 15,000 gallon liquid asphalt storage tank.

(e) One (1) hot oil heater, fired by natural gas with a maximum heat input capacity of 1.4 million British thermal units per hour. The heater exhausts at stack SV2-2.

### History

A FESOP for a stationary drum mix asphalt plant was issued to Sellersburg Stone Co., Inc., on December 9, 1996. A Minor Modification to the permit was issued on October 14, 1997, for the addition of asphalt silos, feed bins, a hot oil heater and liquid storage tank to the source. A Second Minor Modification to the permit was issued on September 14, 1998, for the addition of asphalt storage silos and replacement of the existing baghouse with a new one. Additionally, on October 28, 1998, a Significant Modification to the permit was issued which covered the replacement of the existing dryer/mixer and burner with new, larger, units.

On June 17, 1999, Sellersburg Stone Co., Inc., submitted a request to construct and operate a new 300 ton per hour drum mix asphalt plant. Sellersburg Stone Co., Inc., has agreed to accept limits on the total regulated air pollutant emissions from the modified source such that the requirements of 326 IAC 2-7 (Part 70 Permit Program) will not apply and that the requirements of Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21 are satisfied.

**Stack Summary**

| Stack ID | Operation | Height (feet) | Diameter (feet) | Flow Rate (acfm) | Temperature ($^0$F) |
|---|---|---|---|---|---|
| SV2-1 | 300 ton\hr asphalt plant baghouse | 20 | 3.4 x 2.3 | 58,255 | 280 |
| SV2-2 | 1.4 MMBtu/hr hot oil heater | 9 | 1 | 23.5 | 600 |

**Recommendation**

The staff recommends to the Commissioner that the Significant Permit Revision be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on June 17, 1999.

**Emission Calculations**

See Appendix A of this document for detailed emissions calculations (3 pages).

**Potential To Emit of Modification**

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

The particulate matter PTE is restricted by the applicable 326 IAC 6-1 emission rate limit of 0.03 grains per dry standard cubic foot of exhaust gas from the plant exhaust.

| Pollutant | Potential To Emit (tons/year) |
|---|---|
| PM | 171.0 |
| PM-10 | 5826.2 |
| $SO_2$ | 0.3 |
| VOC | greater than 100 |
| CO | 43.2 |
| $NO_x$ | 142.9 |

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

**Justification for Revision**

The Federally Enforceable State Operating Permit (FESOP) is being modified through Significant Permit Revision. This revision is being performed pursuant to 326 IAC 2-8-11.1(f)(1) because the potential to emit (PTE) particulate matter ten microns (PM-10) and nitrogen oxides ($NO_x$) are each equal to, or greater than, twenty five (25) tons per year.

**County Attainment Status**

The source is located in Clark County.

| Pollutant | Status |
|---|---|
| PM-10 | attainment |
| $SO_2$ | attainment |
| $NO_2$ | attainment |
| Ozone | moderate nonattainment |
| CO | attainment |
| Lead | attainment |

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Clark County has been designated as moderate nonattainment for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

(b) Clark County has been classified as attainment or unclassifiable for all other regulated air pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

**Source Status**

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

| Pollutant | Emissions (tons/year) |
|---|---|
| PM | 93.8 |
| PM-10 | 25.0 |
| $SO_2$ | 0.5 |
| VOC | 0.0 |
| CO | 75.4 |
| NOx | 99.0 |

(a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.

(b) These emissions are based upon the Significant Modification No. 019-9885 to FESOP 019-5424-03109 issued on October 28, 1998.

**Potential to Emit of Modification After Issuance**

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. Because the new drum mix plant being reviewed under this Significant Permit Revision is being added to an existing source, the PTE of the modification below includes limited emissions of both the new and existing asphalt plants combined. Emissions for the existing asphalt plant are based on calculations made in the Significant FESOP Modification No. 019-9885 with the exception of unpaved road and storage emissions which are based on the uncontrolled emission calculations in the original FESOP (019-5424-03109). The control equipment is considered federally enforceable only after issuance of this Significant Permit Revision.

| | Potential to Emit (tons/year) | | | | | | |
|---|---|---|---|---|---|---|---|
| Process/facility | PM * | PM-10 * | $SO_2$ | VOC | CO | $NO_X$ | HAPs |
| dryer(s) & burner(s) * | 59.0 | 65.0 | 0.2 | 25.0 | 28.6 | 95.5 | 23.1 |
| hot oil heater(s) | 0.1 | 0.3 | 0.0 | 0.2 | 2.9 | 3.5 | 0.0 |
| conveying | 10.3 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| unpaved roads | 93.4 | 32.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| storage | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| cold mix production | - | - | 0.0 | 74.7 | 0.0 | 0.0 | - |
| Total Emissions | 162.9 | 99.0 | 0.2 | 99.0 | 31.5 | 99.0 | 23.1 |

* Note: Limited PM/PM10 PTE levels have been revised to reflect the permit limited PTE's rather than the controlled potential emissions. Based on differences in the testing methods which demonstrate compliance for PM and PM-10 limitations, the PM-10 limitation pursuant to 326 IAC 2-8-4 is greater than the PM limitation pursuant to 326 6-1 (based on 90,000 acfm and 58,255 acfm for the existing and new plants, respectively) because it includes the condensible portions in addition to filterable PM-10.

(a) This modification to an existing minor stationary source is not major because the emission increase for volatile organic compounds (VOC) is less than the Emission Offset significant levels and the emission increases for all other regulated air pollutants are less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-3, and 326 IAC 2-2 and 40 CFR 52.21, the Emission Offset and PSD requirements do not apply.

(b) The source has accepted federally enforceable limits for particulate matter 10 microns (PM-10), volatile organic compounds (VOC), and nitrogen oxides ($NO_x$) of 99 tons per year per pollutant. Therefore, the requirements of 326 IAC 2-7 do not apply. Specific changes to the existing limits of the FESOP and new limiting conditions that have been added are discussed in the "Limiting Conditions" section of this TSD, below.

**Federal Rule Applicability**

(a) The new 300 ton per hour asphalt plant is subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.90, Subpart I. Pursuant to NSPS, the following apply to this facility:

(1) Performance tests are required as specified in this Subpart and as outlined in Part 60.8.

(2) On or after the date on which the performance tests are completed, no owner or operator subject to the provisions of Subpart I shall discharge or cause the discharge into the atmosphere from any affected facility any gases which:

(i) Contain particulate matter in excess of 0.04 gr/dscf
(ii) Exhibit 20 percent opacity, or greater

(b) The two 30,000 gallon and the one (1) 15,000 gallon liquid asphalt storage tanks are subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Parts 60.110b, Subpart Kb) because each based on capacity and date of construction.

(c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63, applicable to this source.

**State Rule Applicability**

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 because it has the potential to emit PM greater than 100 tons per year, and the potential to emit NOx and VOC, including federally enforceable limits, is greater than 10 tons per year in Clark County. Pursuant to this rule, the owner/operator of this facility must annually submit an emission statement of the facility. The annual statement must be received by April 15 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

326 IAC 5-1-2 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Visible Emission Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions shall meet the following:

(a) visible emissions shall not exceed an average of 30% opacity in 24 consecutive readings.

(b) visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

326 IAC 6-1-2 (Particulate Emissions Limitations)

The particulate matter emissions from the aggregate mixing and drying operation are subject to the requirements of 326 IAC 6-1-2 (Particulate Emissions Limitations). The rule requires that the particulate matter emissions be limited to 0.03 gr/dscf when located in a county listed in 326 IAC 6-1-7. This is equivalent to a particulate matter emission rate of 10.47 pounds per hour based on an exhaust rate of 58,255 actual cubic feet per minute (acfm) and exhaust temperature of 280 degrees Fahrenheit.

326 IAC 6-4 (Fugitive Dust Emissions)

Pursuant to 326 IAC 6-4-2, fugitive dust shall not be seen crossing the boundary or property line of the plant. The source shall comply with all requirements under 326 IAC 6-4 (Fugitive Dust Emissions).

326 IAC 6-5 (Fugitive Particulate Emissions Limitations)

Pursuant to the rule, a fugitive dust plan must be submitted, reviewed and approved. The source has submitted an approved fugitive dust control plan consisting of the following:

(a) Fugitive particulate matter emissions from plant roadways, parking lots and yards shall be controlled by the following methods:

(1) application of water and/or water-dust control material solutions on an as needed basis;
(2) sweeping between watering on an as needed basis; and
(3) limiting vehicular speeds to 10 miles per hour.

(b) Fugitive particulate matter emissions from conveying/handling operations shall be controlled by the following methods:

(1) utilizing a water spray system at strategic transfer locations; and
(2) minimizing all drop distances.

(c) Fugitive particulate matter emissions from storage piles shall be controlled by the following methods:

(1) watering storage piles on an as needed basis;
(2) minimizing drop distances; and
(3) maintaining moisture contents of materials above 1.5%.

326 IAC 8-5-2 (Miscellaneous Operations: Asphalt Paving)

Pursuant to 326 IAC 8-5-2, the permittee shall not allow the use of cutback asphalt or asphalt emulsion containing more than 7% oil distillate by volume of emulsion, except as used for the following purposes:

(a) penetrating prime coating,
(b) stockpile storage mix, and
(c) application during the months of November, December, January, February, and March.

**Limiting Conditions**

Pursuant to 326 IAC 2-8-4 (FESOP):

(a) The applicant shall limit the combined natural gas usage, for the natural gas dryer burners, to 682.15 million cubic feet (MMCF) per 12 consecutive month period. This shall limit NOx emissions from the dryer burners to 95.5 tons per 12 consecutive months.

(b) PM-10 emissions from the aggregate dryers (including combustion emissions from the aggregate dryer burners) shall be limited to 14.62 pounds per hour, each. These PM-10 emission rate limitations combined with a total source asphalt production limit of 4,000,000 tons per 12 consecutive months will limit the PM-10 PTE from the dryers to 65.0 tons per year such that, when combined with PM-10 emissions from the other operations at the source, shall limit the potential to emit PM-10 of the source to 99 tons per year.

(c) The use of volatile organic compounds in the production of cold mix/cutback asphalt shall be limited to 78.6 tons per twelve (12) consecutive month period such that, based on a conservatively estimated total volatilization of 95%, VOC emissions will be limited to 74.7 tons per twelve consecutive months.

Based on these limitations, the requirements of 326 IAC 2-7 do not apply. This requirement also satisfies the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset). See Appendix A for supporting calculations and the Permit Revision Letter for detailed changes and additions to limiting condition language in the permit.

**Compliance Requirements**

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise from a source's failure to take appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

1. The combustion of natural gas in the aggregate dryer burners has applicable compliance monitoring conditions as specified below:

   (a) the consumption of natural gas for the entire source must be limited to 682.15 million cubic feet (MMCF) per 12 consecutive months, in order to ensure compliance with 326 IAC 2-8 (FESOP).

   (b) Quarterly reports shall be submitted to OAM Compliance Section. These reports shall include the usage of natural gas, rolled on a monthly basis.

   These monitoring conditions are necessary because NOx emissions from the combustion of natural gas must be limited to below the Title V major source level of 100 tons per year to comply with 326 IAC 2-8-4 and to avoid 326 IAC 2-7 (Part 70) applicability.

2. The conveying, material transfer points, screening, unpaved roads, storage piles, mixing and drying operation have applicable compliance monitoring conditions as specified below:

   (a) Daily visible emissions notations of the conveyors, material transfer points, screening, unpaved roads, storage piles, and mixer/dryer stack shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

(b) The Permittee shall record the total static pressure drop across each baghouse controlling the mixing and drying operations at least once daily when the aggregate dryer is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 3.0 to 5.0 inches of water or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of the above mentioned range for any one reading.

(c) The inlet temperature to the baghouse shall be maintained within a range of 200-400 degrees Fahrenheit (°F) to prevent overheating of the bags and to prevent low temperatures from mudding up the bags. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the temperature reading is outside of the above mentioned range.

These monitoring conditions are necessary because the baghouse for the burner/dryer operation must operate properly to ensure compliance with 40 CFR Part 60.90 (Subpart I-Standards of Performance for Hot Mix Asphalt Facilities), and 326 IAC 2-8 (FESOP).

**Conclusion**

The construction and operation of this new 300 ton per hour drum-mix asphalt plant, and the operation of the existing 600 ton per hour asphalt plant shall be subject to the conditions of the attached proposed **Significant Permit Revision No. 019-11077-03109.**

# Indiana Department of Environmental Management
# Office of Air Management

## Addendum to the
## Technical Support Document for a Significant Permit Revision to a
## Federally Enforceable State Operating Permit

| | |
|---|---|
| Source Name: | Sellersburg Stone Co., Inc. |
| Source Location: | 1019 E. Utica Street, Sellersburg, IN 47172 |
| County: | Clark |
| SIC Code: | 2951 |
| Permit Revision No.: | 019-11077-03109 |
| Permit Reviewer: | Janusz Johnson |

On September 21, 1999, the Office of Air Management (OAM) had a notice published in the *Evening News*, Jeffersonville, Indiana, stating that Sellersburg Stone Co., Inc., had applied for a Significant Permit Revision to construct and operate a new 300 ton per hour asphalt plant to be added to the existing 600 tons per hour stationary asphalt plant permitted under FESOP No. 019-5424-03109. The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On October 5, 1999, Sellersburg Stone Co., Inc., submitted comments on the proposed construction permit. The summary of the comments and corresponding responses is as follows (bold emphasis has been added to new language):

Comment 1: Upon review of the draft permit, it was noted that a stack test was being required for plant #1 (section D.1.7). A stack test was done on this plant on August 25, 1999, to comply with the previous major modification. Since this test was done at the same tons per hour as is listed to be done in the new permit, we request that the August 25, 1999, test suffice for the new test requirement, or that this requirement be dropped.

Response 1: The draft permit revision includes changes to the stack testing requirement, Condition D.1.7, to include initial performance testing of the new Plant #2 to assure compliance with the FESOP limits. Prior to the addition of the Plant #2 language, Condition D.1.7 required performance testing for Plant #1 due to the increase in Plant #1 capacity allowed under Significant Modification No. 019-9885. To maintain a clear distinction between the testing requirements for the two plants, the timing language of the condition was revised so that it was clear that the testing for Plant #1 was still required within 180 days of issuance of the Significant Modification No. 019-9885, and that performance testing of the new Plant #2 would be required no later than 180 days after startup of that plant. The stack test conducted on August 25, 1999, for Plant #1 meets the performance testing requirement for the Plant #1 as stated in the revised D.1.7 condition. No changes will be made as a result of this comment.

On October 21, 1999, the OAM determined that the following changes were necessary to improve the practical enforceability of the limiting conditions in the draft permit revision (bold emphasis has been added to new language):

1. Review of the particulate matter ten microns or less in diameter (PM-10) limiting conditions has prompted the OAM to revise the basis of the short term emission limitations of Condition D.1.3. The pound per hour emission limitations in the draft Condition D.1.3 (Particulate Matter 10 Microns) were established to ensure that the potential to emit (PTE) PM-10 from both plants combined would not equal or exceed 100 tons per year. The emission rate limitations were determined based on the estimated hours of operation allowed by Condition D.1.2a which limits the amount of asphalt mix that can be produced by the two plants combined. These estimated hours of operation are based on the maximum production rates of both plants assuming the actual emission rates will decrease linearly with reduced throughput. Upon further consideration, the OAM has determined that it would be more appropriate to define the short term emission limits directly on the limited amount of asphalt mix produced by calculating the limits on a pound per ton produced basis. The combination of the revised emission rate limits in Condition D.1.3 and the production limits detailed in Condition D.1.2a will better ensure compliance with a limited PTE of 99 tons per year PM-10 because the revised emission limits will be directly relatable to the production limitations for the two plants when they are operating below maximum capacities. Therefore, Condition D.1.3 on Page 21 of the revised permit pages shall be changed as follows (bold emphasis added to new language):

   D.1.3 Particulate Matter 10 Microns (PM-10)
   Pursuant to 326 IAC 2-8-4, particulate matter 10 microns emissions from the Plant #1 and Plant #2 aggregate dryer/mixers shall not exceed ~~14.6~~ **0.0325** pounds per ~~hour~~ **ton of asphalt mix produced**, each, including both filterable and condensible fractions. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

   The modified Condition D.1.3 in Item 8 of the permit revision cover letter has also been revised to be consistent with the changes discussed above.

# Appendix A: Modification Emission Calculations

Company Name: **Sellersburg Stone Co., Inc.**
Plant Location: **1019 E. Utica Steet, Sellersburg, IN 47172**
County: **Clark**
FESOP Revision No.: **019-11077-03109**
Date: **July 28, 1999**
Permit Reviewer: **Janusz Johnson**

## I. Potential Emissions

### A. Source emissions before controls

****dryer combustion ****

(gas/>100MMBTU/uncontrolled)

The following calculations determine the amount of emissions created by natural gas combustion, from the aggregate dryer burner, based on 8,760 hours of operation and US EPA's AP-42, 5th Edition, Section 1.4 - Natural Gas Combustion, Tables 1.4-1, 1.4-2, and 1.4-3.

Pollutant: **116** MMBtu/hr * 8760 hr/yr / 1000 Btu/cf * 2000 lb/ton * Ef (lb/MMcf) = (ton/yr)  Fuel Usage (MMCF/yr): 1016.16

| | | | |
|---|---|---|---|
| P M: | 1.9 lb/MMcf = | 0.97 | ton/yr |
| P M-10: | 7.6 lb/MMcf = | 3.86 | ton/yr |
| S O 2: | 0.6 lb/MMcf = | 0.30 | ton/yr |
| N O x: | 280.0 lb/MMcf = | 142.26 | ton/yr |
| V O C: | 5.5 lb/MMcf = | 2.79 | ton/yr |
| C O: | 84.0 lb/MMcf = | 42.68 | ton/yr |

****hot oil heater combustion ****

(gas/<100MMBTU/uncontrolled)

The following calculations determine the amount of emissions created by natural gas combustion, from the hot oil heater, based on 8,760 hours of operation and US EPA's AP-42, 5th Edition, Section 1.4 - Natural Gas Combustion, Tables 1.4-1, 1.4-2, and 1.4-3.

Pollutant: **1.4** MMBtu/hr * 8760 hr/yr / 1000 Btu/cf * 2000 lb/ton * Ef (lb/MMcf) = (ton/yr)  Fuel Usage (MMCF/yr): 12.26

| | | | |
|---|---|---|---|
| P M: | 1.9 lb/MMcf = | 0.01 | ton/yr |
| P M-10: | 7.6 lb/MMcf = | 0.05 | ton/yr |
| S O x: | 0.6 lb/MMcf = | 0.00 | ton/yr |
| N O x: | 100.0 lb/MMcf = | 0.61 | ton/yr |
| V O C: | 5.5 lb/MMcf = | 0.03 | ton/yr |
| C O: | 84.0 lb/MMcf = | 0.52 | ton/yr |

*** * aggregate drying: drum-mix plant * ***

The following calculations determine the amount of emissions created by aggregate drying, based on 8760 hours of use and EPA SCC #3-05-002-05:

Potential asphalt produced (ton/yr): 2628000

| | | | | | | |
|---|---|---|---|---|---|---|
| P M: | 19 lb/ton x | **300** ton/hr / 2000 lb/ton x | 8760 hr/yr = | 24966.00 | ton/yr |
| P M-10: | 4.4 lb/ton x | 300 ton/hr / 2000 lb/ton x | 8760 hr/yr = | 5781.60 | ton/yr |
| Lead: | 3.3E-06 lb/ton x | 300 ton/hr / 2000 lb/ton x | 8760 hr/yr = | 0.00 | ton/yr |
| HAPs: | 0.0058 lb/ton x | 300 ton/hr / 2000 lb/ton x | 8760 hr/yr = | 7.62 | ton/yr |

HAPs include benzene, ethylbenzene, formaldehyde, methyl chloroform, naphthalene, toluene, xylene; arsenic, cadmium, chromium, manganese, mercury, and nickel compounds.

*** * conveying / handling * ***

The following calculations determine the amount of emissions created by material handling of aggregate, based on 8760 hours of use and AP-42, Ch 11.19.2

Ef = .0032* (U/5)^1.3 / (M/2)^1.4 * k = 0.0100 lb/ton

where k= 1 (particle size multiplier)
U = 12 mph mean wind speed (worst case)
M = **2.00** % moisture

| | | | | | |
|---|---|---|---|---|---|
| P M : | 0.0100 lb/ton x | **285** ton/hr / 2000 lb/ton x | 8760 hr/yr = | 12.47 | ton/yr |
| P M-10: | 10% of PM = | | | 1.25 | ton/yr |

## * * unpaved roads * *

The following calculations determine the amount of emissions created by vehicle traffic on unpaved roads, based on 8760 hours of use and AP-42, Ch 11.2.1.

**A. Misc. Trucks (Dump Trucks)**

15 trip/hr x
0.378 mile/roundtrip x
8760 hr/yr = 49669.20 miles per year

Ef = k*5.9*(s/12)*(S/30)*(W/3)^0.7*(w/4)^0.5*((365-p)/365)
= 4.53 lb/mile
where k = 0.8 (particle size multiplier)
s = 4.8 % silt content of unpaved roads
p = 125 days of rain greater than or equal to 0.01 inches
S = 15 miles/hr vehicle speed
W = 21 tons average vehicle weight
w = 14 wheels

PM: $\frac{4.53 \text{ lb/mi} \times 49669.2 \text{ mi/yr}}{2000 \text{ lb/ton}}$ = 112.60 tons/yr

P M-10: 35% of PM = 39.41 ton/yr

## * * storage * *

The following calculations determine the amount of emissions created by wind erosion of storage stockpiles, based on 8760 hours of use and AP-42, Ch 11.2.3.

Ef = 1.7*(s/1.5)*(365-p)/235*(f/15)
= 1.27 lb/acre/day for sand
= 1.39 lb/acre/day for stone
= 1.16 lb/acre/day for slag
= 1.16 lb/acre/day for gravel
= 0.93 lb/acre/day for RAP
where s = 1.1 % silt for sand
s = 1.2 % silt of stone
s = 1.0 % silt of slag
s = 1.0 % silt of gravel
s = 0.8 % silt for RAP
p = 125 days of rain greater than or equal to 0.01 inches
f = 15 % of wind greater than or equal to 12 mph

Ep (storage) $\frac{Ef * sc * (20 \text{ cuft/ton}) * (365 \text{ day/yr})}{(2000 \text{ lb/ton})*(43560 \text{ sqft/acre})*(25 \text{ ft})}$
= 0.01 tons/yr for sand
= 0.01 tons/yr for stone
= 0.00 tons/yr for slag
= 0.00 tons/yr for gravel
= 0.00 tons/yr for RAP
Total PM: 0.02 tons/yr

where sc = 2.3 x 1000 tons storage capacity for sand
sc = 2.3 x 1000 tons storage capacity for stone
sc = x 1000 tons storage capacity for slag
sc = 0.6 x 1000 tons storage capacity for gravel
sc = 0.6 x 1000 tons storage capacity for RAP

| | | | |
|---|---|---|---|
| P M-10: | 35% of PM = | 0.00 | tons/yr for sand |
| | 35% of PM = | 0.00 | tons/yr for stone |
| | 35% of PM = | 0.00 | tons/yr for slag |
| | 35% of PM = | 0.00 | tons/yr for gravel |
| | 35% of PM = | 0.00 | tons/yr for RAP |
| Total PM-10: | | 0.01 | tons/yr |

## II. Allowable Emissions

A1. The following calculations determine allowables based on 326 IAC 6-1-2, which limits stack emissions from this asphalt plant to 0.03 gr/dscf:

$$0.03 \frac{\text{grain}}{\text{dscf}} * 58255 \text{ acfm} * \frac{528}{460 + 280 \text{ Temp}} * \frac{100 - 2.00 \text{ \% moisture}}{100} * 525600 \frac{\text{minute}}{\text{year}} * \frac{1}{7000 \text{ grain}} * \frac{1 \text{ ton}}{2000 \text{ lb}} = 45.88 \frac{\text{tons PM}}{\text{year}}$$

## III. Limited Potential Emissions

The following limits are based on the existing 600 ton per hour asphalt plant and the new 300 ton per hour asphalt plant operating together. The limits represent combined usages of the two plants.

**FUEL USAGE LIMITATION (combined dryer burner usage)**

**A. Natural Gas**

$$95.50 \frac{\text{tons NOx}}{\text{year limited}} / 387.54 \frac{\text{tons NOx}}{\text{year potential}} * 2768.16 \frac{\text{MMCF}}{\text{year potential}} = 682.15 \frac{\text{MMCF}}{\text{year limited}}$$

**PRODUCTION THROUGHPUT LIMITATIONS**

Potential Production for both plants based on 8760 hours of operation per year: 7884000
Combined Production Limitation for both asphalt plants at the source: 4000000 tons/yr
(based on operation at maximum capacities this limit is equivalent to 4444 hours per year)

Combined PM & PM10 emissions of selected facilities based on production limitation:

| facilities | unlimited PTE | | limited PTE | |
|---|---|---|---|---|
| | PM | PM10 | PM | PM10 ** |
| dryers and burners * | 116.3 | ** | 59.0 | 65.0 |
| conveying | 20.3 | 2.0 | 10.3 | 1.0 |
| unpaved roads | 184.0 | 64.4 | 93.4 | 32.7 |
| Sub Total | 320.6 | | 162.7 | 98.7 |

* additionally constrained by 326 IAC 6-1 allowable of 0.03 gr/dscf
** separately limited to 14.6 lbs/hr, each, based on limited hours of operation due to production limit